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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,421	06/29/2001	Juha Salo	367.40302X00	5222

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER	
SHANNON, MICHAEL R	
ART UNIT	**PAPER NUMBER**
2614	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/893,421	SALO ET AL.	
	Examiner	Art Unit	
	Michael R. Shannon	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20010629*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Gotwald (USP 5,987,518), cited by Examiner.

Regarding claim 1, the claimed "head end device for use in a hierarchical network" is met as follows:

- The claimed "classifier connectable to a source of content and operable to place the content into at least one of a plurality of hierarchical data streams corresponding to a particular class of content" is met by the prioritizing modules (48, 50, and 52 of Figure 2), which operate to set a priority band in each MPEG message based on one or a combination of various conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 2, the claimed "device as claimed in claim 1, wherein the classification of content is made in accordance with its data type" is met by the prioritization being done according to data type [col. 6, line 8].

Regarding claim 3, the claimed "device as claimed in claim 2, wherein the classifier is connectable to a data stream of content in the form of data elements and a splitter connected to the output of the classifier wherein the classifier identifies the data type of each element of the stream and inserts a marker into said stream indicative of a priority assigned to the element such that splitter subsequently places each data element, in accordance with the marker, into a corresponding hierarchical transport stream for subsequent transmission by the network" is met by the prioritizing modules (48, 50, and 51 of Figure 2), which can look at the incoming packet, extract the condition variable (classification), look up the priority band from a table, insert the priority into the message, and pass the message with the inserted priority along to the multiplexing driver [col. 6, lines 9-13].

Regarding claim 4, the claimed "device as claimed in claim 2, further including a connection to a look-up table accessible in use by said classifier, the table comprising a set of profiles, each of which includes at least one definition of a priority for a particular data type wherein the selection by the classifier of a particular profile for identifying the data type of each element is determined by the network" is met by the look-up table, which stores priority information corresponding to the classification (condition) of the content [col. 6, lines 9-13].

Regarding claim 5, the claimed "device as claimed in claim 1, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the conditions such as source IP address, destination IP address, data type and

connection type, which serve as criterion for prioritization of the streams [col. 6, lines 6-8].

Regarding claim 6, the claimed "method of transmitting content in a hierarchical network comprising classifying content received for transmission and placing the content into at least one of a plurality of hierarchical data streams corresponding to the classification of the content" is met by the prioritizing step, which operates to set a priority band in each MPEG message based on one or a combination of various conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 7, the claimed "method as claimed in claim 6, including defining a data stream for a particular classification" is met by the conditions such as source IP address, destination IP address, data type and connection type, which can later define the prioritization of the MPEG data streams [col. 6, lines 6-8].

Regarding claim 8, the claimed "method as claimed in claim 7, including establishing a set of profiles, each of which includes at least one definition of a data stream for a particular classification wherein the selection of a particular profile is determined by the network" is again, met by the look-up table, which aides in the classification and prioritization of content based on the extracted data stream information and the conditions that the prioritizing modules are looking for [col. 6, lines 4-13].

Regarding claim 9, the claimed "method as claimed in claim 8, wherein the network determines the selection of a profile on the basis of an intended recipient of the

content" is met by the prioritization being based on the destination IP address [col. 6, line 7].

Regarding claim 10, the claimed "method as claimed in claim 8, wherein the network determines the selection of a profile on the basis of a service providing said content" is met by the prioritization being based on the source IP address [col. 6, lines 7-8].

Regarding claim 11, the claimed "method as claimed in claim 8, wherein the network determines the selection of a profile on the basis of network load" is met by the prioritization being based on the connection type [col. 6, line 8].

Regarding claim 12, the claimed "method as claimed in claim 6, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the ability to set a priority band in each MPEG message based on one or a combination of various pre-determined conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 13, the claimed "method as claimed in claim 7, wherein the network is a terrestrial digital video broadcast network (DVB-T)" is met by the fact that the network can comprise a CATV network which functions identically to a DVB-T network [col. 3, lines 48-50].

Regarding claim 14, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 6" is met by the same discussion as proposed in the rejection of claim 6, taking into account that this

system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 15, the claimed "program as claimed in claim 14, stored on a computer readable medium" is met by the same fact that the computer executable code is stored on a hard drive or other form of readable medium for execution at the head-end computer.

Regarding claim 16, the claimed "system for delivering content over a hierarchical network" is met as follows:

- The claimed "source of content deliverable, to a network, the network including head end equipment operable to place content into at least one of a plurality of selected hierarchical data streams for transmission by a transmitter" is met by the server which, as discussed above and in column 6, lines 4-13, can place data streams into a plurality of prioritized/classified groups before transmission over the CATV network.
- The claimed "terminal operable to receive the data stream, wherein the head-end equipment classifies the content and in accordance with the classification places it into a corresponding hierarchical data stream" is met by the client of Figure 3, which serves to receive the classified and prioritized data streams from the server [col. 5, lines 22-33].

Regarding claim 17, the claimed "system as claimed in claim 16, wherein the terminal provides a return channel connectable, in use, to the network, such that a

request for the delivery of content may be originated by the terminal" is met by the bidirectional like 20, which serves to request data from the server [col. 5, lines 36-41].

Regarding claim 18, the claimed "system as claimed in claim 16, wherein said hierarchical data streams are ranked in accordance with a predetermined criteria" is met by the conditions such as source IP address, destination IP address, data type and connection type, which serve as criterion for prioritization of the streams [col. 6, lines 6-8].

Regarding claim 19, the claimed "method of delivery content to a terminal in a network having a plurality of hierarchical data streams" is met as follows:

- The claimed step of "receiving a request for content" is met by the receiving of a request from the client over bidirectional line 20 [col. 4, lines 12-13].
- The claimed step of "passing said request to a network gateway and subsequently receiving content identified in said request in the form of at least one content element" is met by the reception of the requested IP data via network interfaces 32 [col. 4, lines 29-31].
- The claimed step of "classifying said at least one content element" is met by the classification/prioritization according to the predetermined conditions [col. 6, lines 4-13].
- The claimed step of "assigning a priority to said at least one content element in accordance with said classification" is met by the same

classification/prioritization according to the predetermined conditions [col. 6, lines 4-13].

- The claimed step of "assigning said content element to a hierarchical data stream appropriate to said priority" is met by the priority determining the transmission of the content [col. 4, lines 60-66].

Regarding claim 20, the claimed "method as claimed in claim 19, wherein a user identity is identified from said request and a corresponding user profile obtained in accordance with which profile priority is assigned to said at least one content element" is met by the priority being able to be based on the destination IP address of the content to be sent to the requesting client [col. 6, lines 4-13].

Regarding claim 21, the claimed "method as claimed in claim 19, wherein said request is received in a return channel established by a terminal of a public land mobile network via a public switched telephone network and said content element is delivered over a broadband broadcast network" is met by the standard network 20, which serves as a bidirectional connection between client and server and the broadband channel 16 which serves to deliver the content from the server to the client [Fig. 1].

Regarding claim 22, the claimed "method as claimed in claim 19, wherein said hierarchical data streams are ranked in accordance with a predetermined criteria" is met by the conditions such as source IP address, destination IP address, data type and connection type, which serve as criterion for prioritization of the streams [col. 6, lines 6-8].

Regarding claim 23, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 19" is met by the same discussion as proposed in the rejection of claim 19, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 24, the claimed "program as claimed in claim 23, stored on a computer readable medium" is met by the same fact that the computer executable code is stored on a hard drive or other form of readable medium for execution at the head-end computer.

Regarding claim 25, the claimed "device as claimed in claim 3, further including a connection to a look-up table accessible in use by said classifier, the table comprising a set of profiles, each of which includes at least one definition of a priority for a particular data type wherein the selection by the classifier of a particular profile for identifying the data type of each element is determined by the network" is met by the look-up table, which stores priority information corresponding to the classification (condition) of the content [col. 6, lines 9-13].

Regarding claim 26, the claimed "method as claimed in claim 7, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the ability to set a priority band in each MPEG message based on one or a combination of various pre-determined conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 27, the claimed "method as claimed in claim 8, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the ability to set a priority band in each MPEG message based on one or a combination of various pre-determined conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 28, the claimed "method as claimed in claim 9, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the ability to set a priority band in each MPEG message based on one or a combination of various pre-determined conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 29, the claimed "method as claimed in claim 10, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the ability to set a priority band in each MPEG message based on one or a combination of various pre-determined conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 30, the claimed "method as claimed in claim 11, wherein said hierarchical data streams are ranked in accordance with a predetermined criterion" is met by the ability to set a priority band in each MPEG message based on one or a combination of various pre-determined conditions extracted from the messages [col. 6, lines 4-6].

Regarding claim 31, the claimed "method as claimed in claim 8, wherein the network is a terrestrial digital video broadcast network (DVB-T)" is met by the fact that

the network can comprise a CATV network which functions identically to a DVB-T network [col. 3, lines 48-50].

Regarding claim 32, the claimed "method as claimed in claim 9, wherein the network is a terrestrial digital video broadcast network (DVB-T)" is met by the fact that the network can comprise a CATV network which functions identically to a DVB-T network [col. 3, lines 48-50].

Regarding claim 33, the claimed "method as claimed in claim 10, wherein the network is a terrestrial digital video broadcast network (DVB-T)" is met by the fact that the network can comprise a CATV network which functions identically to a DVB-T network [col. 3, lines 48-50].

Regarding claim 34, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 7" is met by the same discussion as proposed in the rejection of claim 7, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 35, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 8" is met by the same discussion as proposed in the rejection of claim 8, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 36, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 9" is met by the same discussion as proposed in the rejection of claim 9, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 37, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 10" is met by the same discussion as proposed in the rejection of claim 10, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 38, the claimed "system as claimed in claim 17, wherein said hierarchical data streams are ranked in accordance with a predetermined criteria" is met by the conditions such as source IP address, destination IP address, data type and connection type, which serve as criterion for prioritization of the streams [col. 6, lines 6-8].

Regarding claim 39, the claimed "method as claimed in claim 20, wherein said request is received in a return channel established by a terminal of a public land mobile network via a public switched telephone network and said content element is delivered over a broadband broadcast network" is met by the standard network 20, which serves

as a bidirectional connection between client and server and the broadband channel 16 which serves to deliver the content from the server to the client [Fig. 1].

Regarding claim 40, the claimed "method as claimed in claim 20, wherein said hierarchical data streams are ranked in accordance with a predetermined criteria" is met by the conditions such as source IP address, destination IP address, data type and connection type, which serve as criterion for prioritization of the streams [col. 6, lines 6-8].

Regarding claim 41, the claimed "method as claimed in claim 21, wherein said hierarchical data streams are ranked in accordance with a predetermined criteria" is met by the conditions such as source IP address, destination IP address, data type and connection type, which serve as criterion for prioritization of the streams [col. 6, lines 6-8].

Regarding claim 42, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 20" is met by the same discussion as proposed in the rejection of claim 20, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 43, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 21" is met by the same discussion as proposed in the rejection of claim 21, taking into account that this

system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Regarding claim 44, the claimed "computer program comprising executable code for execution when loaded on a computer, wherein the computer is operable in accordance with said code to carry out the method according to claim 22" is met by the same discussion as proposed in the rejection of claim 22, taking into account that this system and method is implemented using a head-end computer which can be programmed according to many well known executable code standards.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R. Shannon who can be reached at (571) 272-7356 or Michael.Shannon@uspto.gov. The examiner can normally be reached by phone Monday through Friday 8:00 AM – 5:00PM, with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at (571) 272-7353.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **(571) 272-2600**.

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
June 12, 2005

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600